

REMARKS/ARGUMENTS

This is a reply to the Office Action dated September 25, 2006.

Claims 1-4, 6-20 remain in this application. Claim 5 has been canceled. Claims 9-14 have been withdrawn. New claims 19-20 have been added.

The amendments to claims 1 and 8 are supported by the specification at page 3, lines 24-26, and page 6, line 13. New claims 19-20 are supported by the specification at page 3, line 28 to page 4, line 1.

Claims 1-4, 8, and 16-18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Storey et al. (US 4,784,892) in view of Brock (US 4,041,203), Willey et al. (US 5,766,737), Boe et al. (US 4,082,878), Mallen et al. (US 5,288,544), Fujiwara et al. (US 5,951,535), and Floden (US 3,837,995).

It is respectfully submitted that none of the seven relied upon references teach or suggest a method for making a nonwoven laminate fabric comprising a third continuous filament precursor web, of which all the fabric material consists of thermoplastic filaments, that is positioned between and in contact with first and second continuous filament precursor webs, wherein the webs are formed from dissimilar polymers, and wherein the third continuous filament precursor web alone acts as a binding agent for a consolidating step. The resulting durable nonwoven laminate fabric exhibits improved tactile and ductile qualities, as well as improved tensile strength, and the nonwoven fabric product is eminently suitable for application in improving the comfort and use of hygiene, medical and industrial products.

The primary reference to Storey et al. not only fails to teach forming continuous filaments in forming the three fibrous webs, but teaches away from such a modification. The laminated non-woven material described by Storey requires the presence and use of high pulp levels in the central layer thereof in combination with meltblown microfibers. In particular, Storey et al. require meltblown microfiber outer layers which sandwich a central layer produced partly of meltblown microfibers and partly of wood

pulp as a so-called "coform" (e.g., col. 3, lines 3-43; col. 5, line 18; claim 1). The overall three-layered structure is referenced by Storey et al. as the "MCM" structure. The working examples and related discussion of Storey et al. represent that the high level of pulp content in the MCM structure, which is used without causing linting of pulp fibers due to the pulp being "held captive" or "encapsulated" by the jointly required polymeric meltblown microfibers matrix (and not continuous filaments), is essential to providing the "mop-up" capacity performance associated with the Storey et al. invention (see col. 4, line 40 to col. 5, line 12; Abstract).

The proposed substitution described in the Office Action of a spunbond material for not only the outer meltblown microfiber layers but also the pulp/meltblown microfiber coform central layer of Storey et al.'s MCM structure would require omission of at least two critical features of Storey et al.'s MCM structure; i.e., high pulp content and pulp encapsulating meltblown microfibers. Therefore, for the sake of argument only, if the Storey et al. structure were modified in the manner suggested in the Office Action, the MCM structure would not appear to meet its intended function and manner of use and operation.

The statements set forth at page 4 of the most recent Office Action regarding different hypothetical ways that the three-layer MCM structure might be consolidated ignores the fact that Storey et al. *teach* how to consolidate the MCM structure of relevance to that reference (see, col. 1, line 56 to col. 2, line 2; col. 3, lines 37-48; FIG. 2). There is no suggestion or motivation identified in the prior art for why one of ordinary skill in the art might depart from Storey et al.'s express instructions in this respect and divert into the realm of hypothetical alternatives for consolidating Storey et al.'s MCM structure.

Brock et al. teach a discontinuous microfiber mat adjacent to at least one side of a continuous filament web (see, e.g., col. 1, line 67 to col. 2, line 5; col. 4, lines 10-17; claim 1). Brock et al. teach that the polymer of discontinuous microfiber mat(s) is utilized to consolidate the laminate (see, e.g., col. 4, lines 43-59; Examples I-II). Brock

et al.'s suggestion of using a discontinuous microfiber mat to consolidate the laminate teaches away from the present invention's requirement that a continuous filament layer be used in the consolidation step.

The other secondary references also teach away from Applicants' invention. The Willey et al. reference teaches a trilaminate nonwoven fabric requiring a meltblown middle layer 12 to impart fluid repellency while outer spunbonded webs impart soft texture and flexibility to the finished fabric (col. 2, lines 27-29, 37-41). Again, the present invention uses an intervening thermoplastic polymer continuous filament web, and not a meltblown central layer, for consolidation of a nonwoven laminate.

The Office Action (at pgs. 7-8) is understood to discount this difference between the present invention and Willey et al. because the separately relied upon prior art of Boe et al., Mallen, Fujiwara et al. purportedly suggest that the art recognizes staple fibers and filamentary fibers are interchangeable with known tradeoffs.

When considered in the context of *their entire teachings*, it is apparent that the secondary references to Boe et al., Mallen et al., Fujiwara et al. do not suggest continuous synthetic filaments can be substituted for staple synthetic fibers in nonwoven applications in general. The Boe et al. reference relates to a single matted fiber sheet that contains a predominance of cotton or rayon and is consolidated with a resin binder (see, e.g., col. 2, lines 3-12, 50-66; Examples 1-3). Mallen et al. describe woven fabric towels (see, e.g., Examples 1-2). Fujiwara et al. suggest that both long fiber nonwoven fabrics and short fiber nonwoven fabrics have "merits and demerits", and Fujiwara et al.'s stated objective was to beneficially integrate long and short fibers into a single absorptive article (col. 1, lines 33-68; col. 2, lines 54-63). Fujiwara et al. pile up a short fiber web comprising hot-melt-adhesive composite short fibers upon a long fiber web and then use heated air to soften and tackify at least the short fibers to consolidate the laminate (see, e.g., col. 12, lines 37-65; claim 1). In view of these observations, Boe et al., Fujiwara et al., and Mallen et al., in the context of their entire teachings teach away from the current invention and do not compensate for the above-

noted differences that exist between the primary reference to Storey et al. and the present claims.

Floden teaches a multi-ply nonwoven web having one or more layers of natural fiber having larger diameter than one or more included layers of synthetic thermoplastic polymeric "usually discontinuous" microfiber layers (Abstract; col. 2, lines 46, 62). The present invention is not directed to autogenously bonding a layer of natural fibers to a discontinuous microfiber layer, and this Floden reference is not relevant to the present invention.

In view of at least the above, Applicants submit that a *prima facie* case of obviousness can not be properly established against any of Claims 1-4, 8, and 16-18 based upon the combination of Storey et al. with Brock et al., Boe et al., Mallen et al., Fujiwara et al., and Floden, and accordingly, Applicants request withdrawal of this rejection.

Claims 6, 7, and 15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the references identified above and set forth in paragraph 2 of the Office Action as applied to claim 1, and further in view of Abed et al. (US 2002/0148547 A1).

Applicants submit that that Abed et al. fail to compensate for the above-identified differences between the primary reference to Storey et al. and present claim 1. Abed et al. teach fusion bonding of nonwoven fabrics formed of staple fiber webs comprising bi-component or bi-constituent fibers (see, e.g. paragraphs numbered [0007]-[0008]), which teaches away from the current invention requiring continuous filaments.

In view of at least the above, Applicants submit that a *prima facie* case of obviousness can not be properly established against any of Claims 6, 7, and 15 based on the combination of Storey et al. with Brock, Willey et al., Boe et al., Mallen et al., Fujiwara et al., Floden, and Abed et al., and accordingly, Applicants request withdrawal of this rejection.

Amdt. dated October 25, 2006

Reply to Office Action of September 25, 2006

In view of the above, it is believed that this application is in condition for allowance, and notice to that effect is respectfully requested.

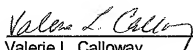
If the Examiner believes that a teleconference would be useful in expediting the prosecution of this application, please do not hesitate to contact me at (704) 697-5177.

Respectfully submitted,

Polymer Group, Inc.

Date: October 25, 2006

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